

N:\Projects\T40000\T47111 LowerDarby\Data\GIS\RI_Report_December_2006\4-28 Arsenic in Surface Soil.mxd

- Not Detected
- 0.0 - 7.0
- 7.0 - 10.0
- 10.0 - 15.0
- 15.0 - 42.2

0 200 400 800 ft.
1 inch = 400 feet



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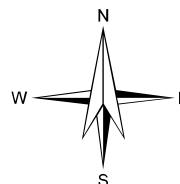
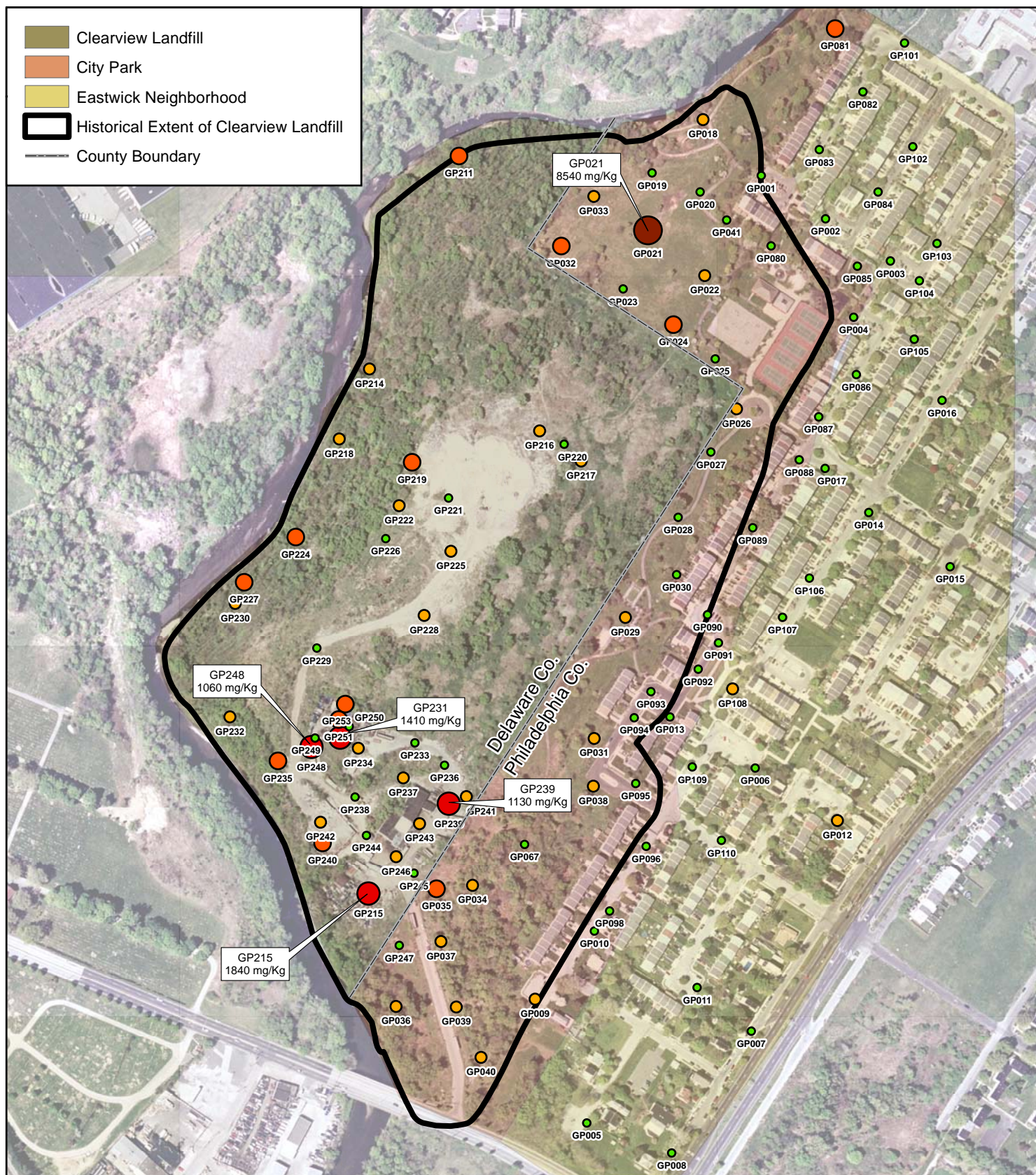


Figure 4-28
Arsenic concentration
in surface soil (mg/Kg)
2002 - 2006
Clearview Landfill
Philadelphia, PA

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N:\Projects\T40000\T47111 LowerDarby\Data\GIS\RI_Report_December_2006\4-29 Arsenic in Surface Soil.mxd
USEPA Office of Solid Waste Directive of Soil Lead Levels for Residential Use = 400 mg/Kg

- 4.6 - 100 mg/Kg
- 101 - 400 mg/Kg
- 401 - 1000 mg/Kg
- 1001 - 2000 mg/Kg
- 2001 - 8540 mg/Kg

0 200 400 800 ft.
1 inch equals 400 feet



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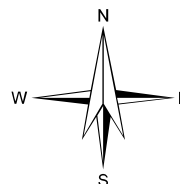
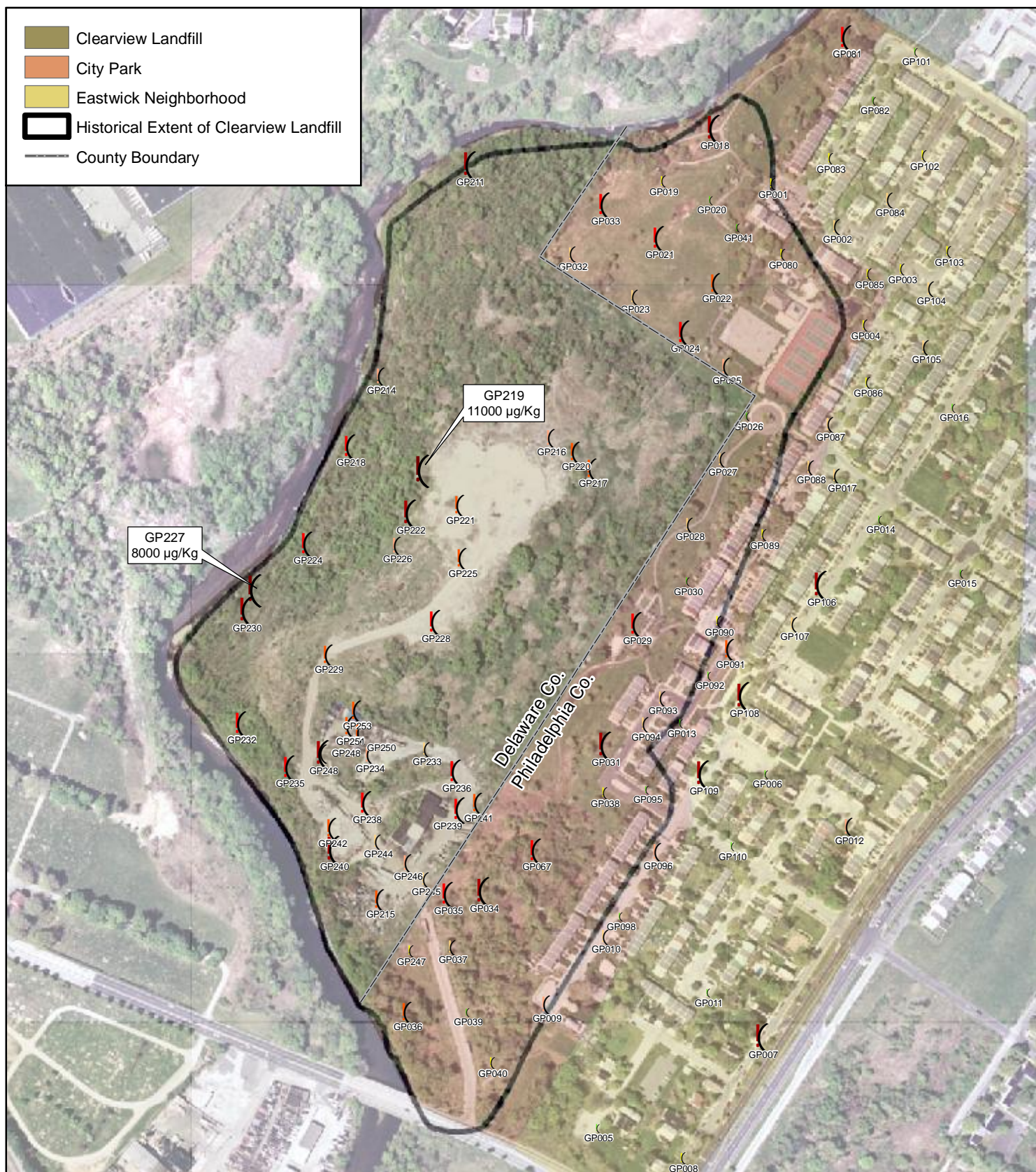


Figure 4-29
Lead concentration
in surface soil (mg/Kg)
2003 - 2006
Clearview Landfill
Philadelphia, PA

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N:\Projects\T40000\T47111 LowerDarby\Data\GIS\RI_Report_December_2006\4-30 Benzo(a)pyrene in Surface Soil.mxd

- (0 - 22 µg/Kg
- (23 - 100 µg/Kg
- (101 - 250 µg/Kg
- (251 - 500 µg/Kg
- (501 - 1000 µg/Kg
- (1001 - 2000 µg/Kg
- (2001 - 4000 µg/Kg
- (4001 - 11000 µg/Kg

0 200 400 800 ft.
1 inch = 400 feet



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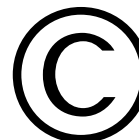
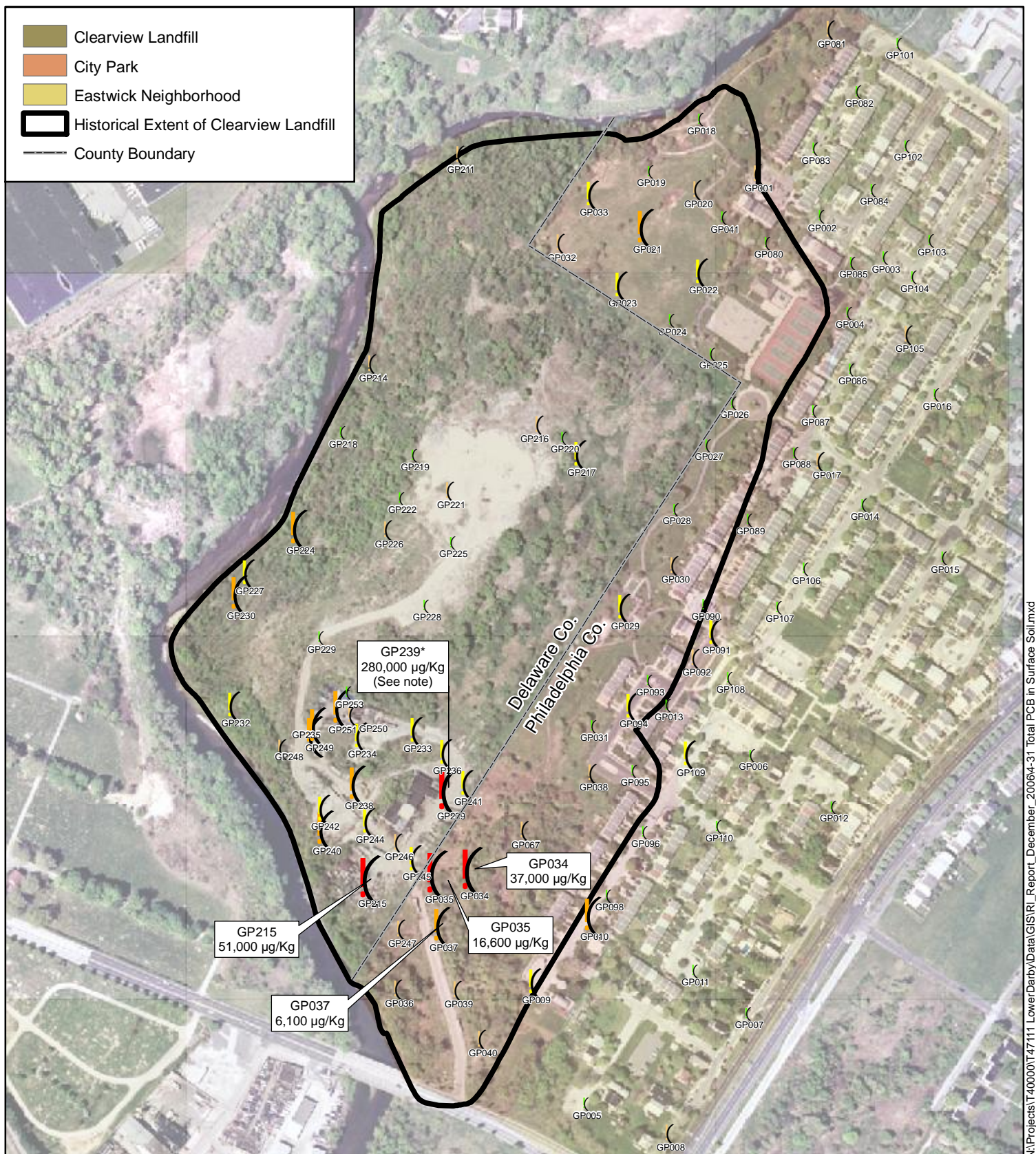


Figure 4-30
Benzo(a)pyrene
in surface soil (µg/Kg)
2002 - 2006
Clearview Landfill
Philadelphia, PA

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PCB List: PCB-1016, PCB-1221, PCB-1242, PCB-1248, PCB-1254, PCB-1260

*Note: Location of a leaking transformer

Total PCB

- (No Detect
- (24 - 94 µg/Kg
- (110 - 860 µg/Kg
- (1000 - 6100 µg/Kg
- (16600 - 280000 µg/Kg

0 200 400 800 ft.
1 inch = 400 feet



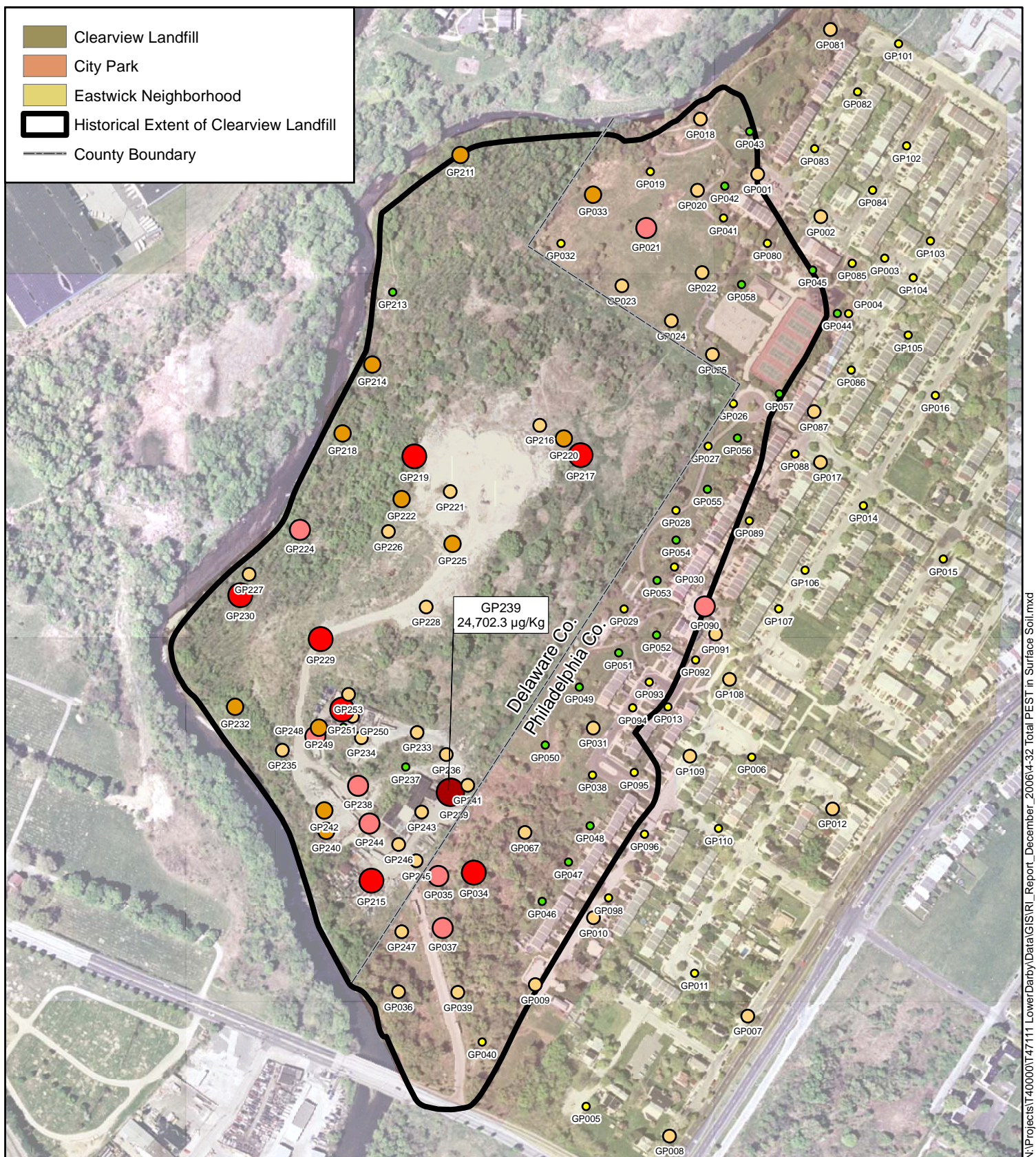
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Figure 4-31

Total PCB
in surface soil (µg/Kg)
2002 - 2006
Clearview Landfill
Philadelphia, PA

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N:\Projects\40000\T47111 LowerDarby\Data\GIS\RI_Report_December_2006\4-32 Total PEST in Surface Soil.mxd

Total Pesticides

- Not Sampled
- Not Detected
- 2.6 - 50 µg/Kg
- 50 - 100 µg/Kg
- 100 - 500 µg/Kg
- 500 - 2000 µg/Kg
- 2000 - 24702.3 µg/Kg

0 200 400 800 ft.
1 inch equals 400 feet



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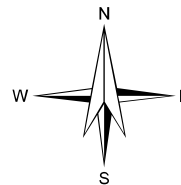
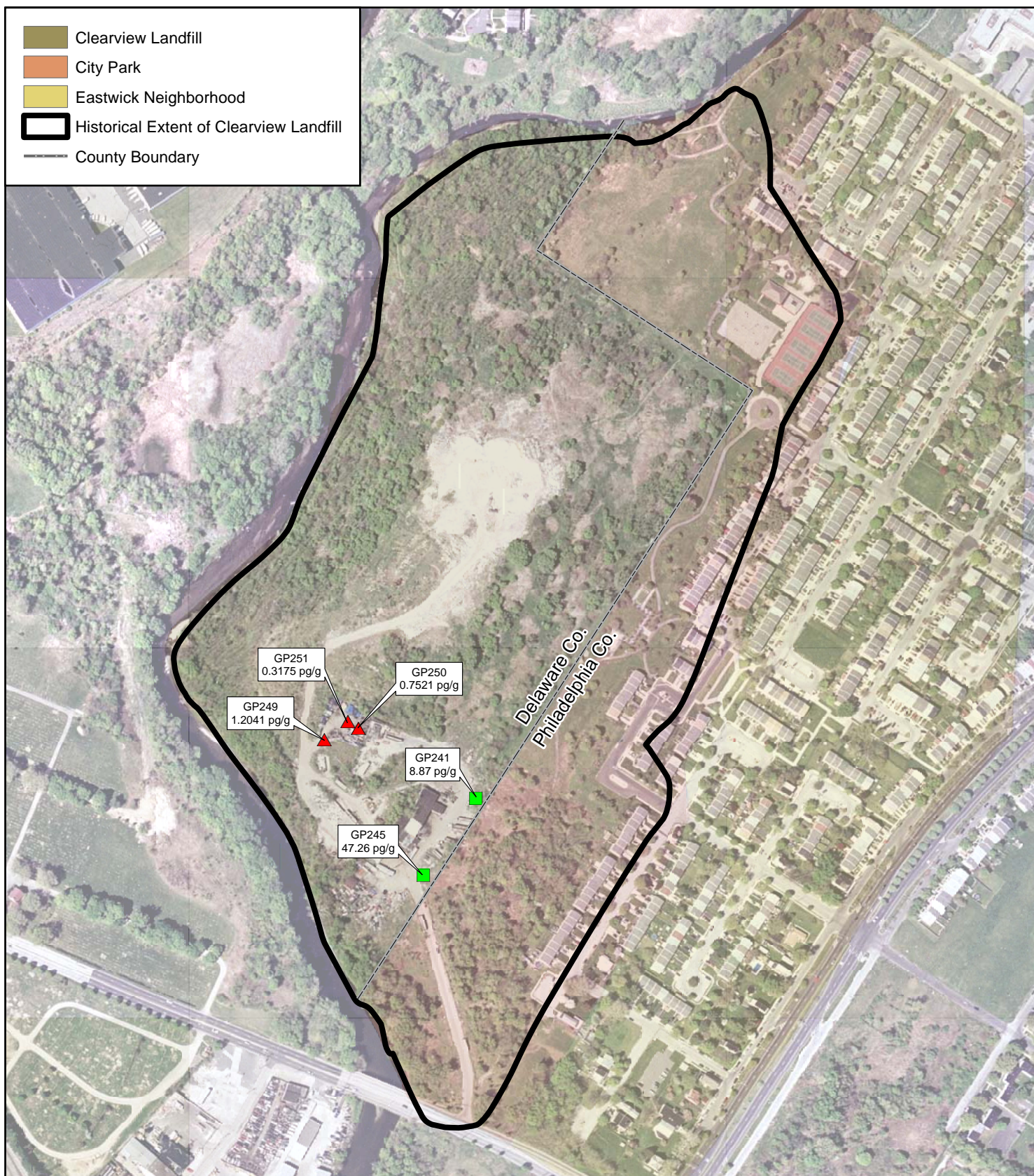


Figure 4-32
Total Pesticides
in surface soil (µg/Kg)
2002 - 2006
Clearview Landfill
Philadelphia, PA

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■ Subsurface Soil Location
▲ Surface Soil Location

0 200 400 800 ft.
 1 inch equals 400 feet

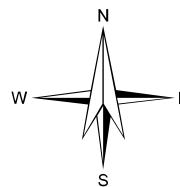
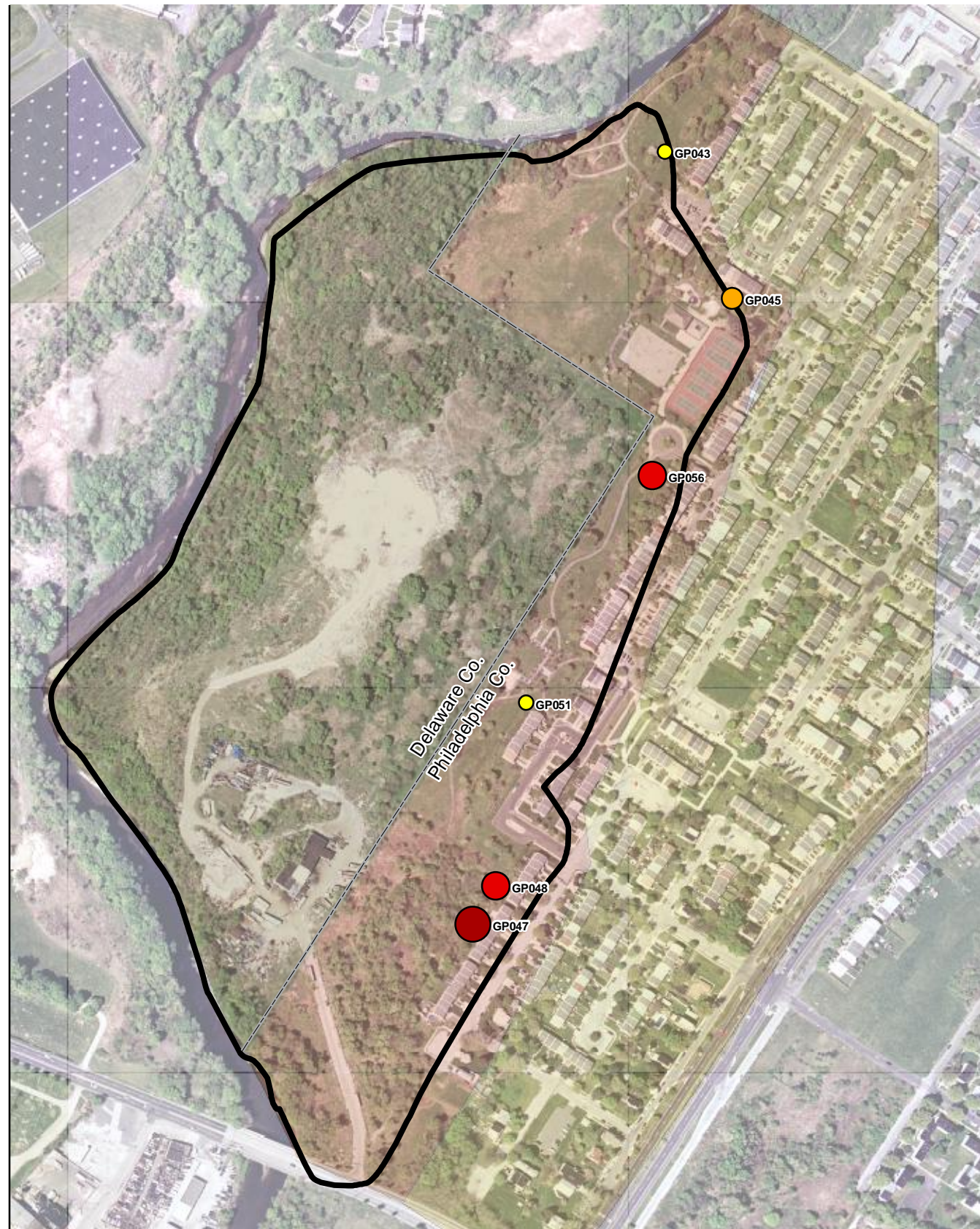


Figure 4-33
 Dioxin in surface and
 subsurface soil (pg/g)
 2002 - 2006
 Clearview Landfill
 Philadelphia, PA

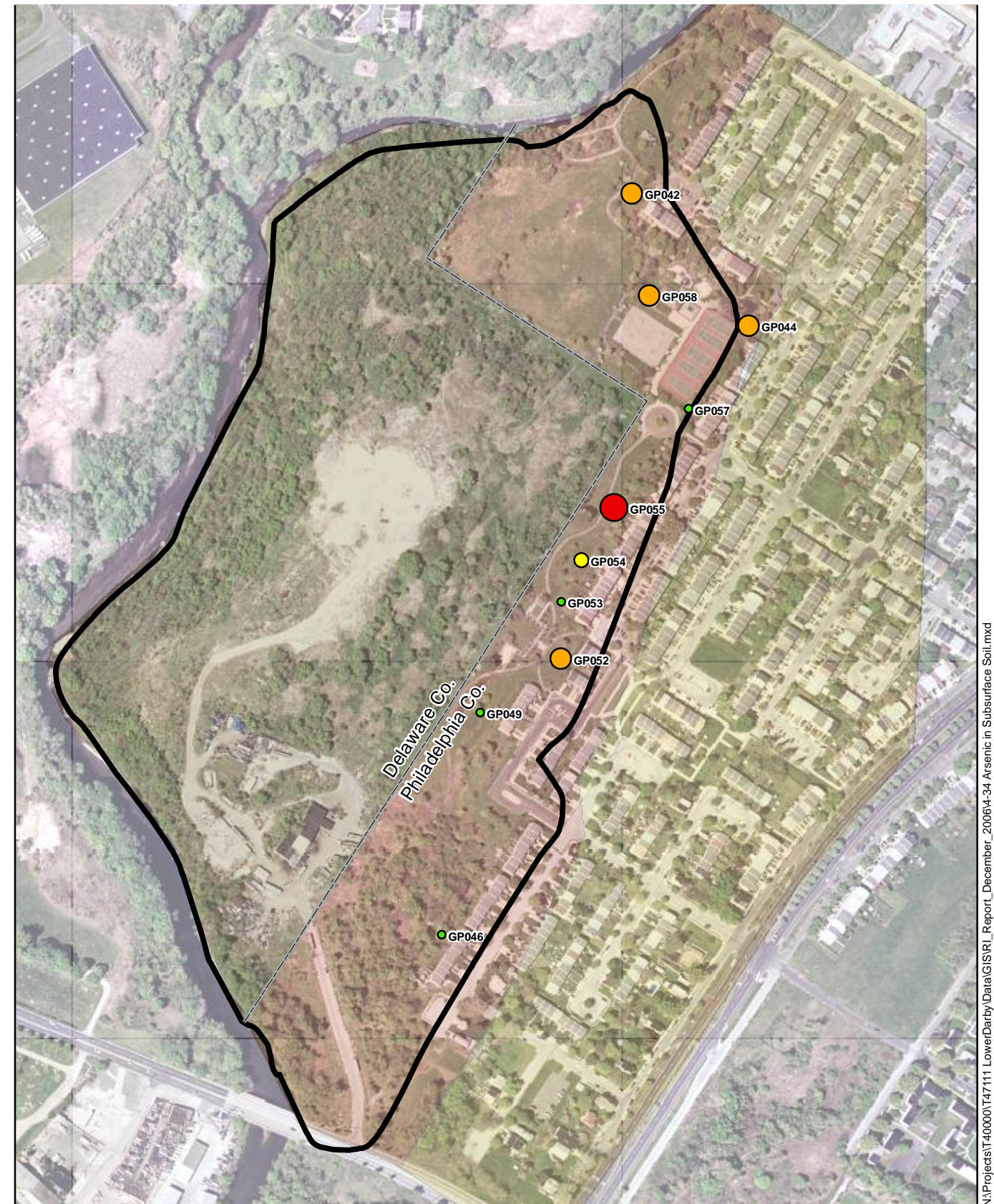


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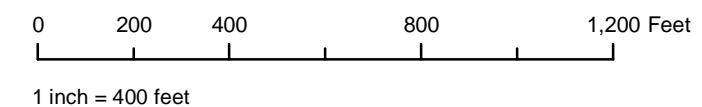
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MEDIUM DEPTH SOILS (2' - 8')



DEEP SOILS (6' - 18')

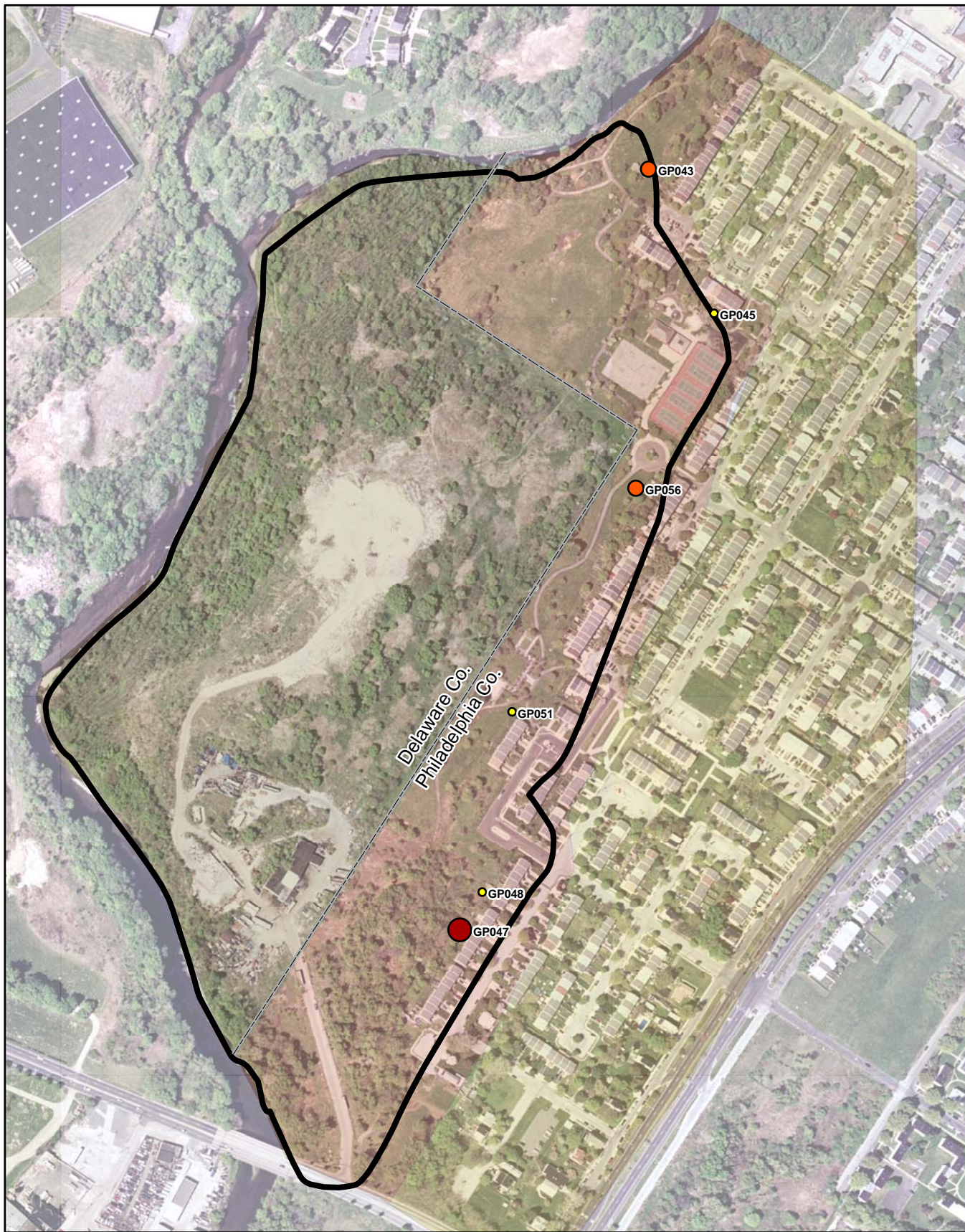


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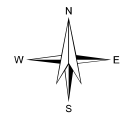
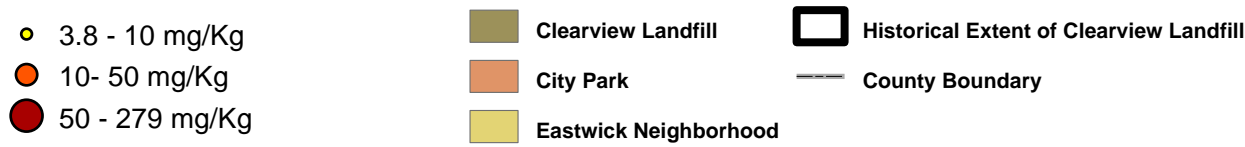
Figure 4-34
Arsenic in
Subsurface soil (mg/Kg)
2003
Clearview Landfill
Philadelphia, PA



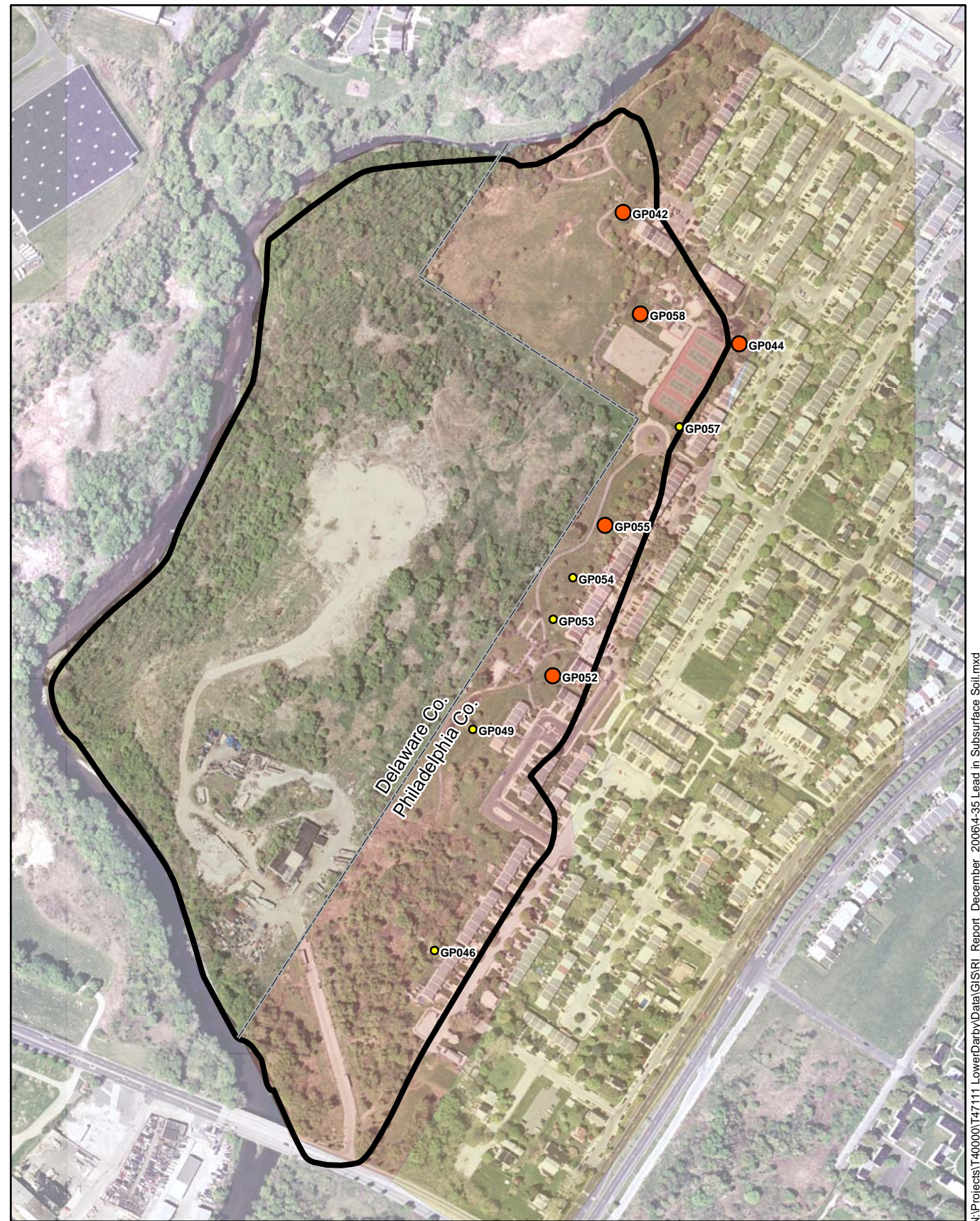
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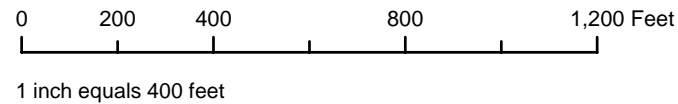
MEDIUM DEPTH SOILS (2' - 8')



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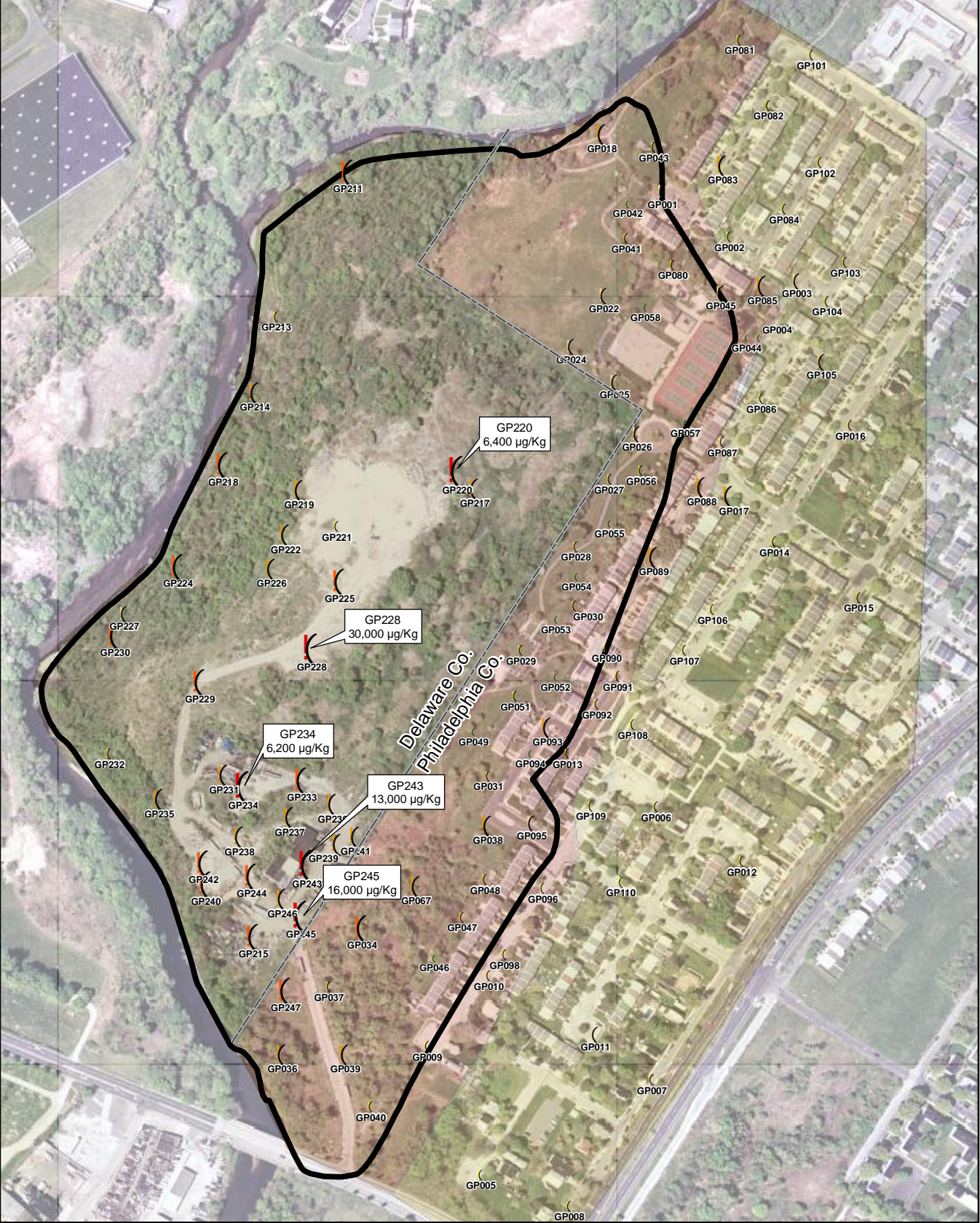
DEEP SOILS (6' - 18')



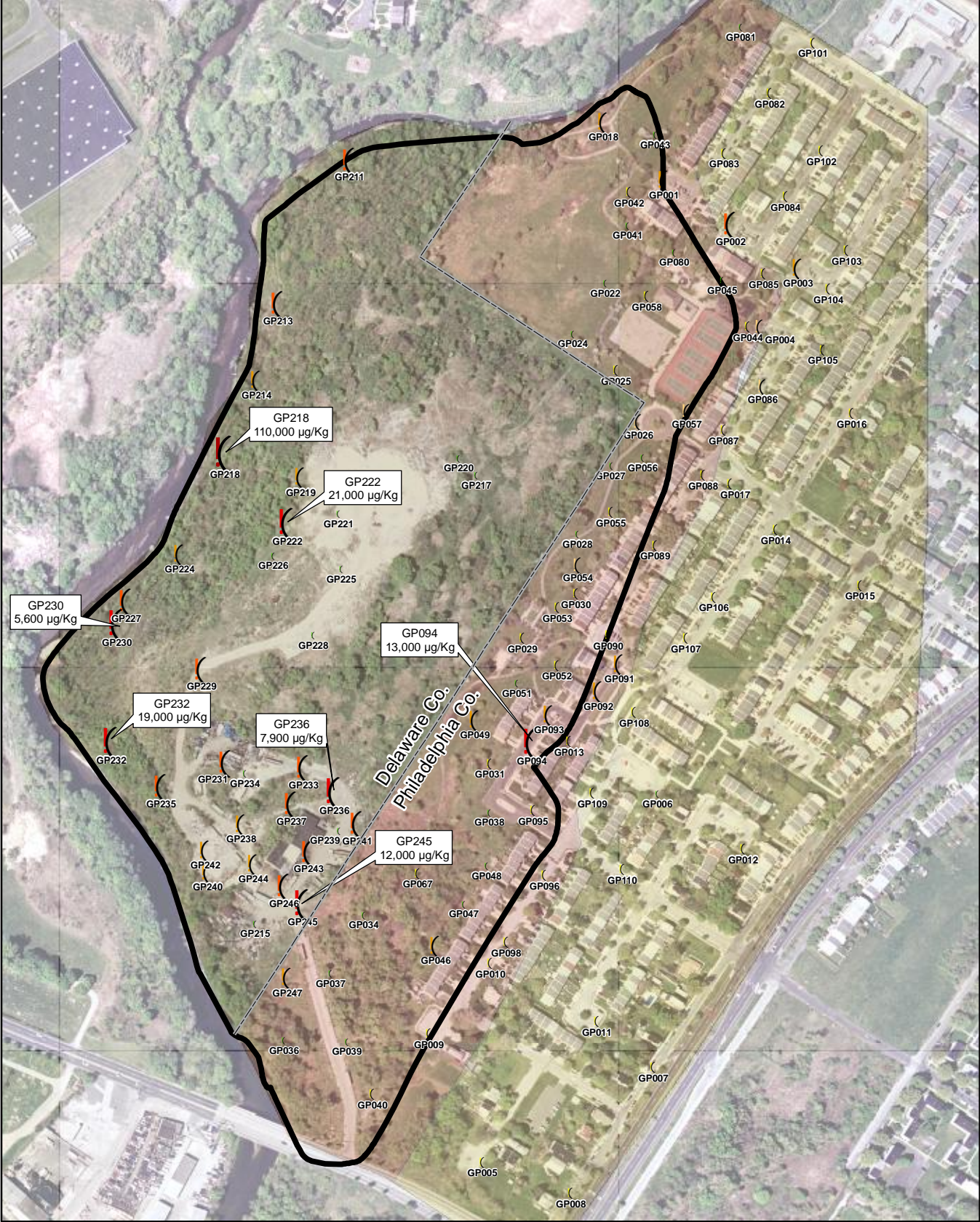
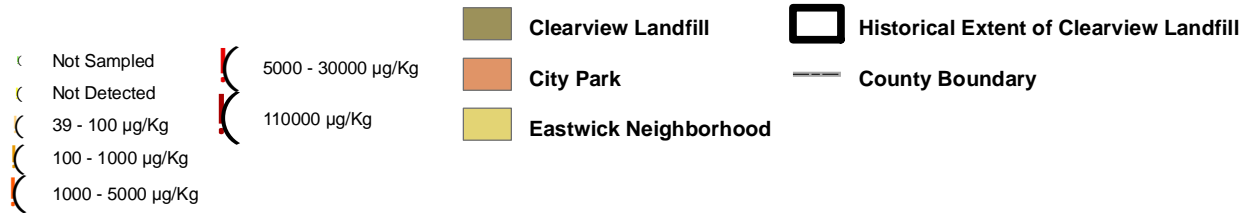
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Figure 4-35
 Lead in
 Subsurface soil (mg/Kg)
 2003
 Clearview Landfill
 Philadelphia, PA

N:\Projects\T40000\T47111 LowerDarbyData\GIS\RI_Report_Report_December_2006\4-35 Lead in Subsurface Soil.mxd



MEDIUM DEPTH SOILS (0.5' - 9')



DEEP SOILS (6' - 32')

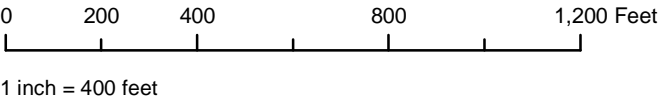
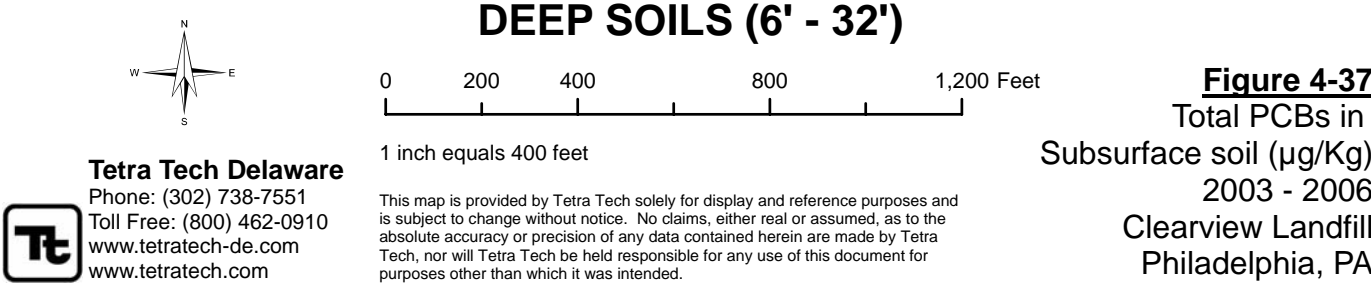
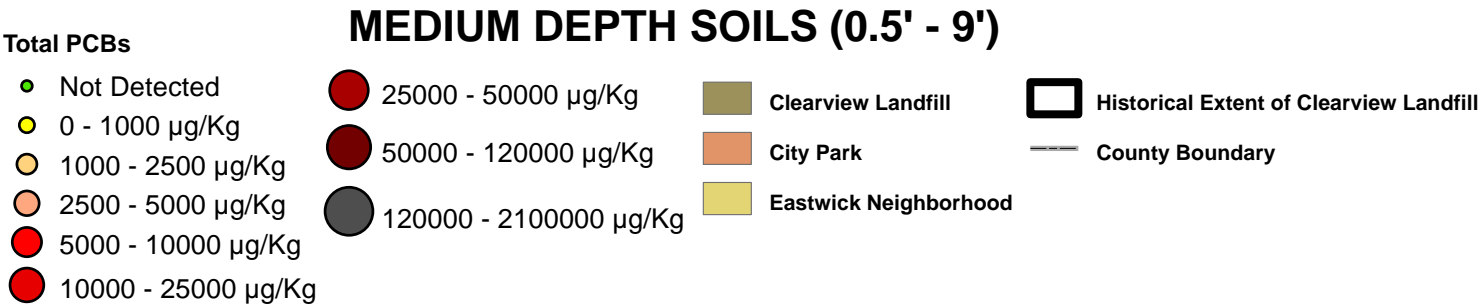
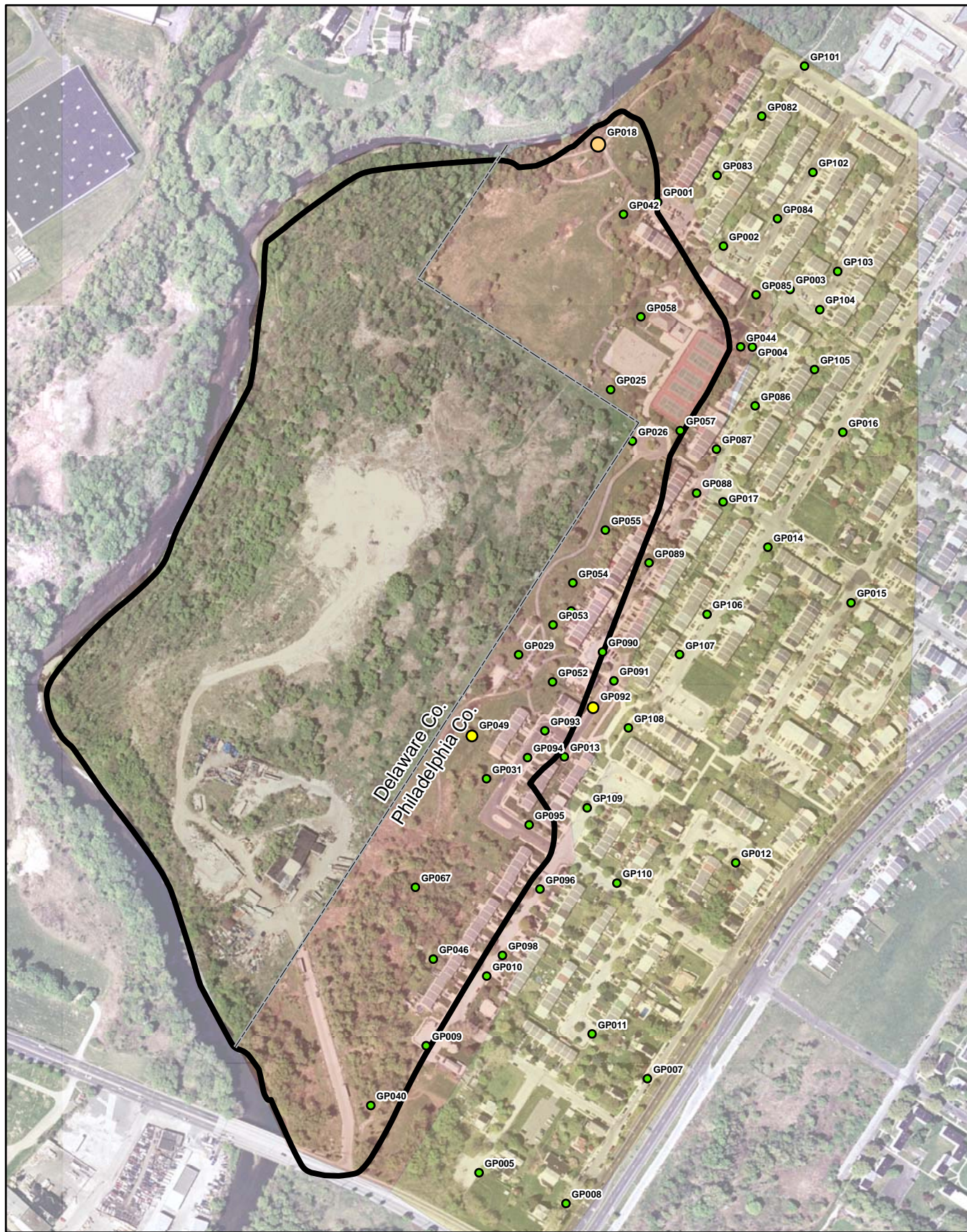
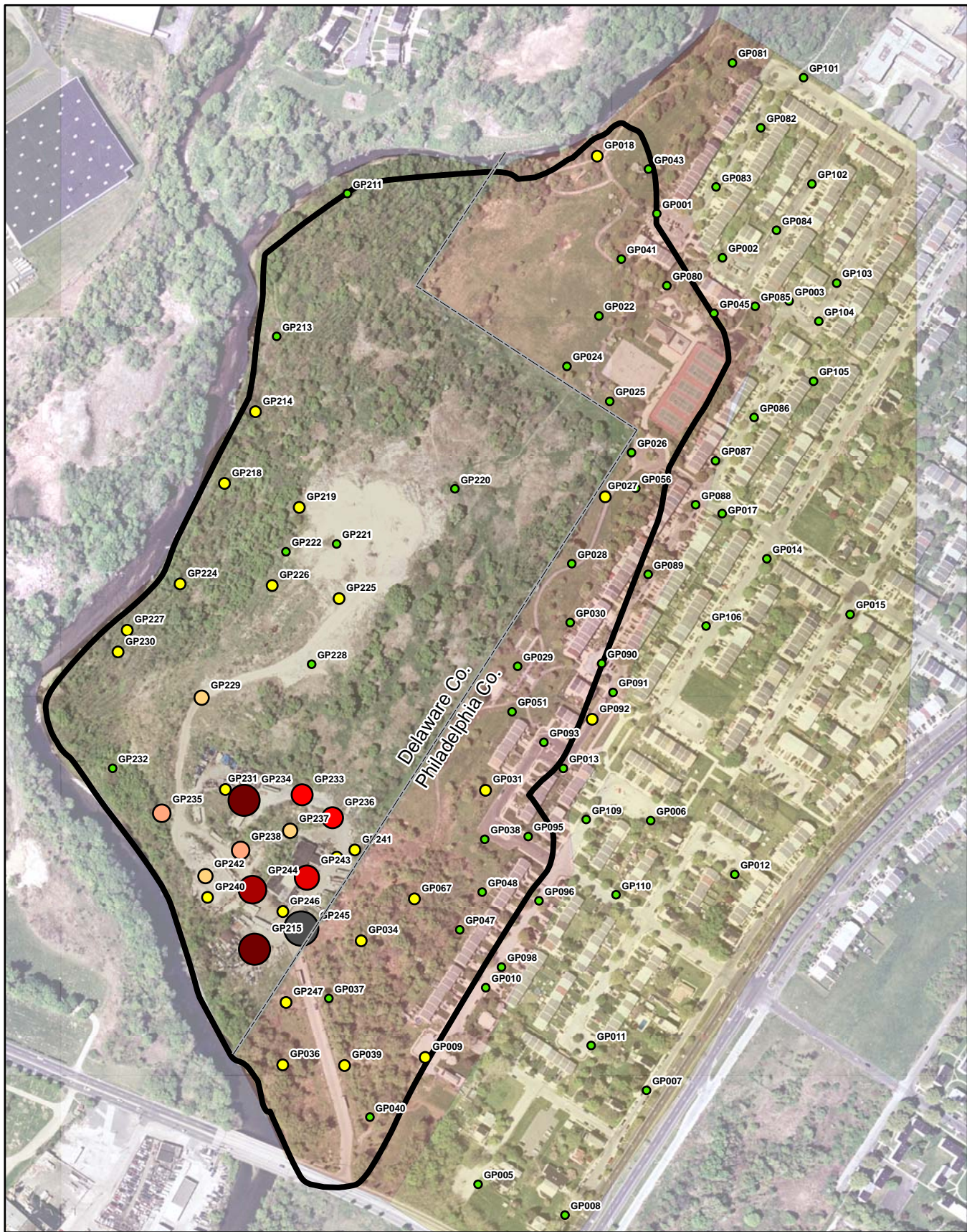


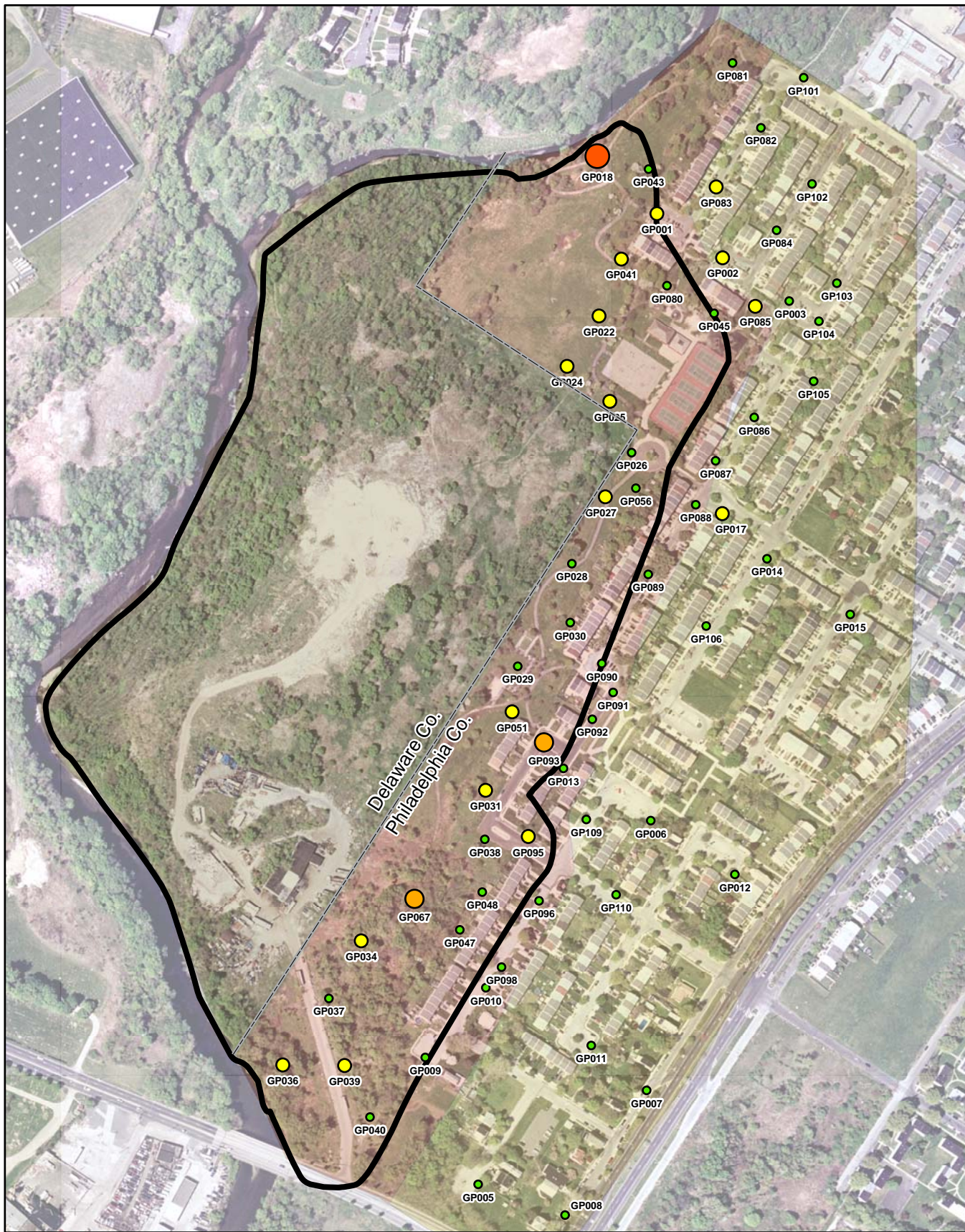
Figure 4-36
Benzo(a)pyrene in
Subsurface soil (µg/Kg)
2003-2006
Clearview Landfill
Philadelphia, PA

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MEDIUM DEPTH SOILS (0.5' - 9')

Total Pesticides

- Not Detected
- 0 - 100 µg/Kg
- 101 - 500 µg/Kg
- 501 - 1000 µg/Kg
- 1001 - 2500 µg/Kg
- 2501 - 5735 µg/Kg

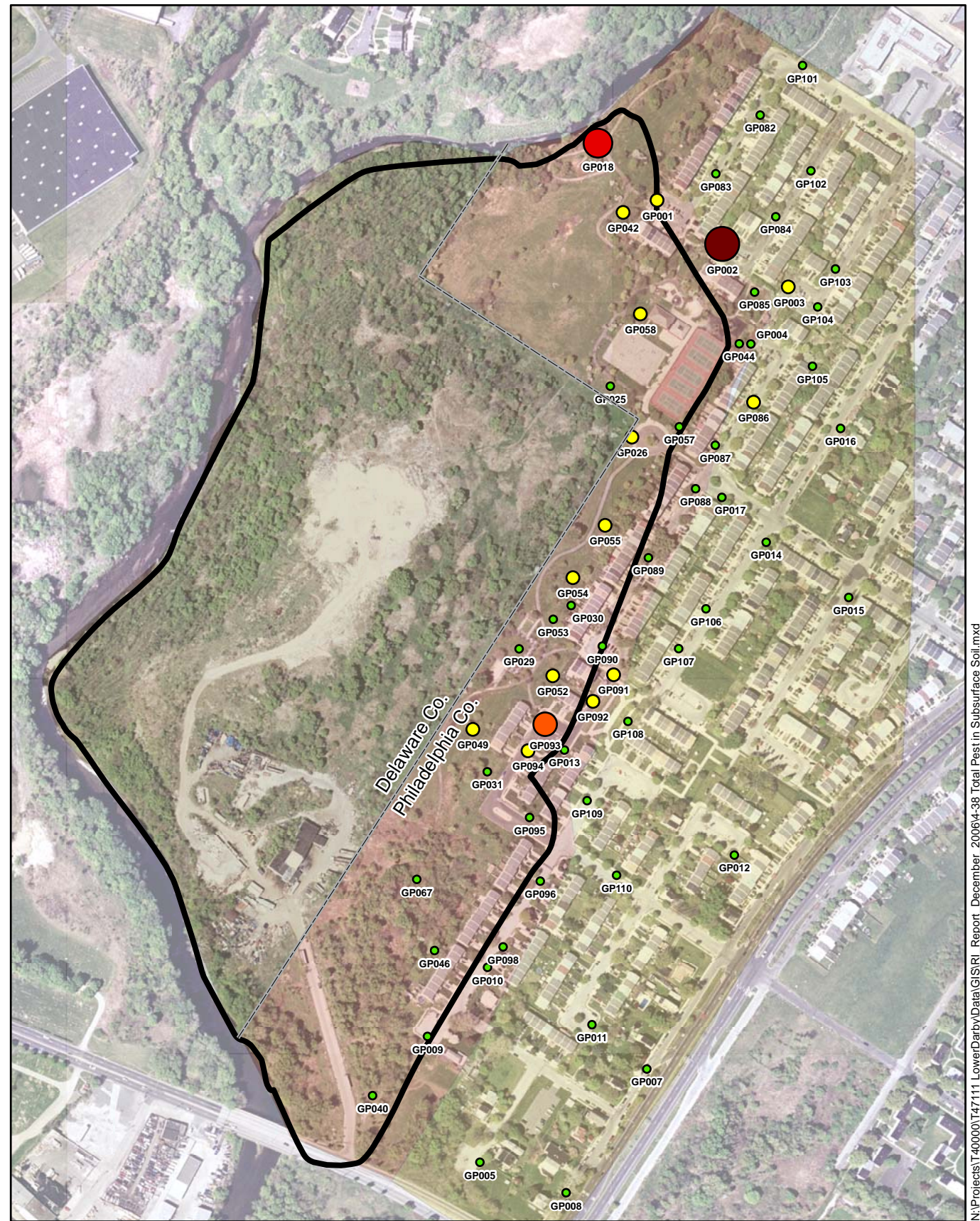
Clearview Landfill

City Park

Eastwick Neighborhood

Historical Extent of Clearview Landfill

County Boundary



DEEP SOILS (6' - 32')



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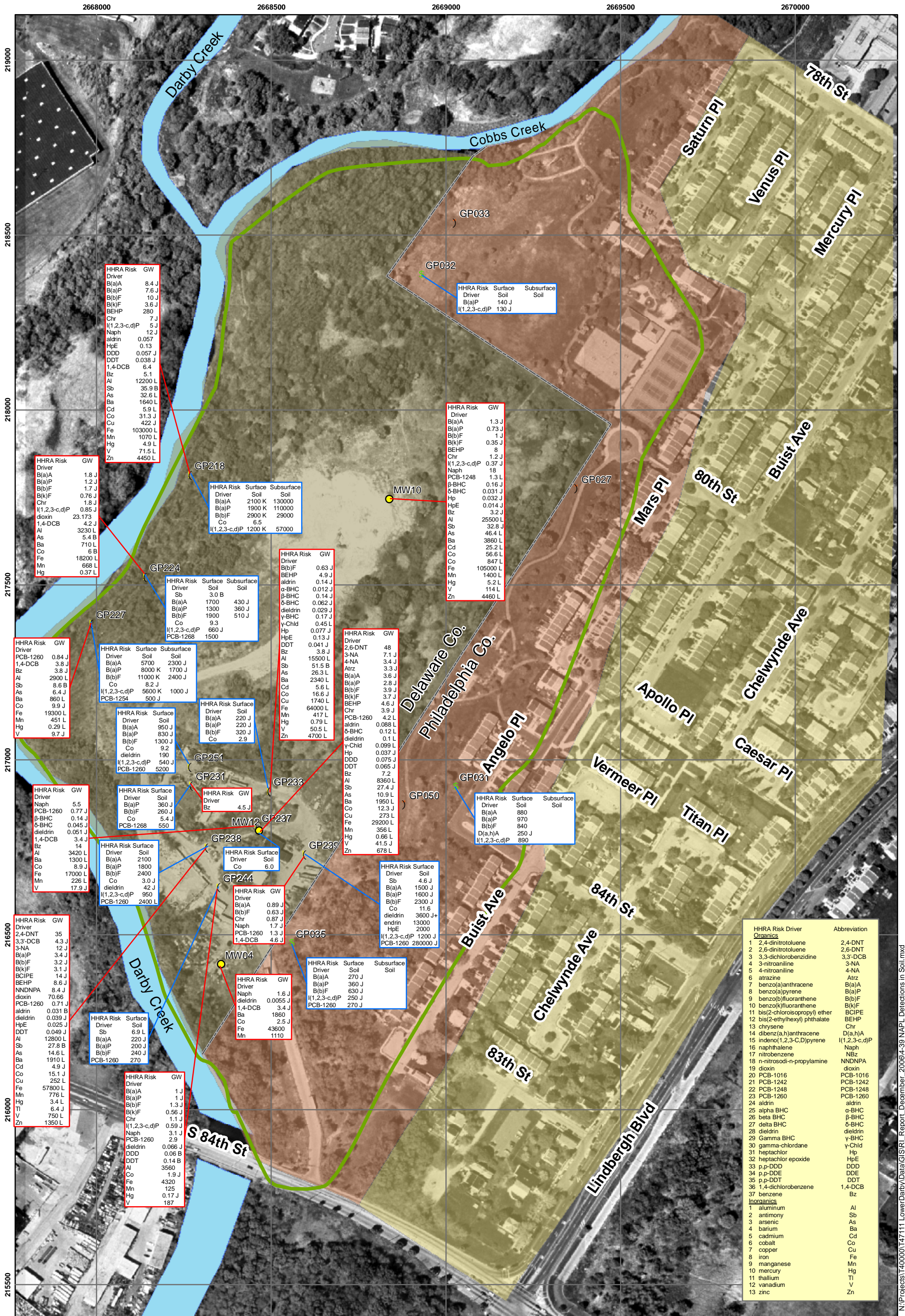
0 200 400 800 1,200 Feet

1 inch equals 400 feet

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Figure 4-38
 Total Pesticides in
 Subsurface soil (µg/Kg)
 2003 - 2004
 Clearview Landfill
 Philadelphia, PA

N:\Projects\140000\T47111 LowerDarbyData\GIS\IRL_Report_Report_2006\4-38 Total Pest in Subsurface Soil.mxd



Grid in PA State Plane South (ft)

Note that Human Health Risk Assessment (HHRA)-based risk drivers are shown in each location.
(All soil risk drivers have a unit of ug/kg, except for antimony and cobalt in mg/kg. All groundwater risk drivers have a unit of ug/L.)

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Sampled 2003

Sampled 2003/2005

Sampled 2004

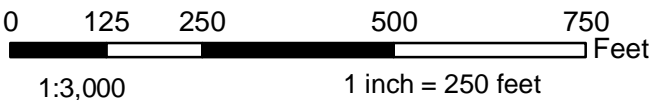
Sampled 2006

County Boundary
- Clearview Landfill

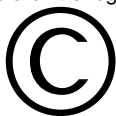
City Park

Eastwick Neighborhood

Historical Extent of Clearview Landfill



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Figure 4-39
NAPL Detections in Soil and Groundwater 2003 - 2006
Clearview Landfill Pennsylvania

HHRA Risk Driver			Abbreviation
Organics			
1	2,4-dinitrotoluene		2,4-DNT
2	2,6-dinitrotoluene		2,6-DNT
3	3,3-dichlorobenzidine		3,3'-DCB
4	3-nitroaniline		3-NA
5	4-nitroaniline		4-NA
6	atrazine		Atr
7	benzo(a)anthracene		B(a)A
8	benzo(a)pyrene		B(a)P
9	benzo(b)fluoranthene		B(b)F
10	benzo(k)fluoranthene		B(k)F
11	bis(2-chloroisopropyl) ether		BCIPE
12	bis(2-ethylhexyl) phthalate		BEHP
13	chrysene		Chr
14	dibenz(a,h)anthracene		D(a,h)A
15	indeno(1,2,3-C,D)pyrene		I(1,2,3-c,d)P
16	naphthalene		Naph
17	nitrobenzene		NBz
18	n-nitrosodi-n-propylamine		NNDNPA
19	dioxin		dioxin
20	PCB-1016		PCB-1016
21	PCB-1242		PCB-1242
22	PCB-1248		PCB-1248
23	PCB-1260		PCB-1260
24	aldrin		aldrin
25	alpha BHC		α-BHC
26	beta BHC		β-BHC
27	delta BHC		δ-BHC
28	dieldrin		dieldrin
29	Gamma BHC		γ-BHC
30	gamma-chlordane		γ-Chld
31	heptachlor		Hp
32	heptachlor epoxide		HpE
33	p,p-DDD		DDD
34	p,p-DDE		DDE
35	p,p-DDT		DDT
36	1,4-dichlorobenzene		1,4-DCB
37	benzene		Bz
Inorganics			
1	aluminum		Al
2	antimony		Sb
3	arsenic		As
4	barium		Ba
5	cadmium		Cd
6	cobalt		Co
7	copper		Cu
8	iron		Fe
9	manganese		Mn
10	mercury		Hg
11	thallium		Tl
12	vanadium		V
13	zinc		Zn

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